DaimlerChrysler AG

Abstract

The invention relates to a device and a method for preventing roll in a vehicle, comprising a detection device (10) which determines an actual value ($\dot{\Psi}_{actual}$) of a yaw rate variable describing the yaw rate of the vehicle, an evaluation unit (11) which determines a setpoint value ($\dot{\Psi}_{\text{setpoint}}$) of the vaw rate variable and a threshold value ($\dot{\Psi}_{threshold}$) of the yaw rate, and a control device (12) for controlling vehicle units (13) provided for influencing the longitudinal and/or transversal dynamics of the vehicle. The evaluation unit (11) controls the vehicle units (13), based on a comparison between the determined actual value ($\dot{\Psi}_{actual}$) of the yaw rate variable and the determined setpoint value (ψ_{setpoint}) of the yaw rate variable, in such a way that the determined actual value (ψ_{actual}) of the yaw rate variable assumes the determined setpoint value ($\dot{\Psi}_{\text{setpoint}}$) of the yaw rate variable, whereby in the event that the setpoint value ($\dot{\psi}_{\text{setpoint}}$) of the yaw rate variable exceeds the threshold value ($\psi_{\text{threshold}}$) of the yaw rate variable, to avoid rollover of the vehicle the evaluation unit (11) limits the determined setpoint value ($\dot{\Psi}_{\text{setpoint}}$) of the yaw rate variable to the determined threshold value ($\psi_{\text{threshold}}$) of the yaw rate variable. According to the invention, the evaluation unit (11) determines the threshold value ($\psi_{\text{threshold}}$) of the yaw rate variable as a function of a threshold value ($\phi_{threshold}$) of a roll angle variable (φ) which describes a roll angle of the vehicle.

(Figure 1)

[see source for figures]

"ist" = actual

"soll" = setpoint

"grenz" = threshold

"Ende" = end

"ja" = yes

"nein" = no